Final Report
A Market Analysis for Value-Added Dairy Opportunities
For the
Southeastern Massachusetts
Dairy Industry

BACKGROUND

Local residents, volunteers, Dartmouth and Westport's Agricultural Commissions, and the Southeastern Massachusetts Agricultural Partnership (SEMAP) have been exploring market opportunities with a small group of dairy producers in Southeastern Massachusetts since 1999. Through their efforts, several ideas for marketing local milk products emerged. Ideas included plastic milk pouch packaging, sales to school milk programs, sales to correctional institutions, and sales of locally packaged and labeled milk products to local retailers. The MA Department of Food and Agriculture developed preliminary calculations of local milk supply volume and public school demand. School milk contracting processes were also examined. Existing milk processing facilities in Massachusetts and Rhode Island had been contacted to determine their interest and their ability to process, package and label local milk products. A major dairy Cooperative has expressed interest in this initiative and has expressed a willingness to work on changes in hauling and member contract agreements. Dupont Company, Canada was contacted and expressed interest in marketing plastic milk pouch packaging in southeastern Massachusetts and providing equipment for packaging. Farmers and staff associated with "Our Family Farms" were contacted and "The Milk Project" report prepared for Seamonds & Co. in February 1996 was reviewed. Dairy farmers remained interested in the potential for marketing local milk and supported market research beyond what volunteers had explored.

Market research was necessary to understand whether or not these ideas had income earning potential in the market place. Consumer buying behavior needed to be understood as well as potential trends for marketing value-added milk products. If further research proved to identify opportunity in the marketplace for farmer income-earning potential from local milk packaging and marketing, the next step will be to develop a business plan, secure producers and determine best business structure.

I. <u>CONTRACT WORK DESCRIPTION</u>

The research services of the University of Massachusetts Dartmouth, Charlton College of Business, Slade's Ferry Bank Center for Business Research were secured in April of 2001 to conduct market research. Their charge was to:

- Survey consumers in southeastern Massachusetts (region bounded by Providence, RI, Boston, MA, and Provincetown, MA),
- Determine consumer demand for dairy products and purchasing preferences,
- Identify where purchases are made,
- Ascertain consumers propensity for purchasing local,
- Determine willingness of consumers to pay more for locally produced and packaged dairy products and how much they would pay, and
- Research value-added market opportunities for dairy products, milk package size preferences, products consumer preferences toward environmentally friendly packaging, and to research trends in market and marketing that identify potential market opportunities.

Results of the research will be used by dairy producers to make decisions about planning and investing in processing, packaging, and marketing of locally branded milk and milk products in southeastern Massachusetts.

MARKET RESEARCH APPROACH

- A market study of consumer interest, attitudes and opinions about purchasing dairy and value-added dairy products was conducted during the summer of 2001.
- The study explored consumer propensity to "buy local" and
- The study explored interest in new products and packaging.

- A survey instrument was developed. Twenty-four closed-ended, multiple choice questions were developed. The survey instrument was created by the Slade's Ferry Bank Center for Business Research, reviewed by three dairy farmers, a member from both the Dartmouth and Westport Agricultural Commissions, and the Pilgrim RC&D Area Council.
- Research involved telephone interviews of 251 consumers within southeastern Massachusetts using random selections from residential telephone directory listings. (1522 telephone attempted phone calls were made, 251 interviews conducted).
- A literature search was conducted to investigate consumer trends and opportunities that may not be reflected in present consumer buying behavior.
- Results of the study were provided in a public presentation at UMass Dartmouth, Slade's Ferry Bank Center for Business Research November 2001 and study results were distributed to those present, including farmers, agricultural commissions, University Corporate Programs and Partnerships faculty, and others.

MARKET RESEARCH FINDINGS

Consumer regularly purchase milk, cheese, butter and ice cream, and to a lesser extent yogurt and cream. Survey results show that consumers prefer to purchase unflavored, 1% milk, by the gallon. Purchases are made at supermarkets. Markets in southeastern Massachusetts include Stop and Shop, Shaws, IGA, Trucci's, and Lees.
Consumers are likely to purchase milk from local farmers if it is easily available at a reasonable price. Nearly half of those surveyed said they were also likely to purchase ice cream, cheese, and butter from local farmers (if easily available and reasonably priced).
Consumers are willing to pay more for a local milk product ($.30 -.60 more per gallon according The Milk Project Research – research included southeastern Massachusetts) .
Environmentally-sound packaging is important to consumers, but few would pay more for it.

<u>Literature Search – Consumer Trends Overview</u>

- The dairy industry needs to reclaim milk's place as the healthiest of all available beverages. The industry needs to aggressively market the health and nutritional benefits (vitamins and minerals) of milk. Advertising, packaging and local brand images should reflect health, well being and self-confidence.
- The Generation X (older teens to those in their early 30s) holds most promise for the future. This will demand attention to packaging and product line. Promoting milk products as healthy and as an energy source is essential to reach this market.
- Although consumers in the study buy dairy products from supermarkets, new trends in shopping habits have convenience stores and supercenters competing for the traditional supermarket shopper. Do not disregard convenience stores and supercenters as future marketplaces for new local dairy products.
- Although consumers in the study prefer purchasing unflavored 1% milk by the gallon, 55% of consumers surveyed also expressed interest in single serve sizes, indicating real potential with the right product and packaging.
- Fifty five percent of the consumers surveyed feel it is important to have environmentally sound packaging, however, fewer were willing to pay more for the packaging. Further cost analysis is necessary to determine if production and marketing of environmentally sound packaging will increase cost of the milk product to the consumer.
- Packaging for convenience, portability, easy to open, easy to pour and re-closeable, provides product differentiation, convenience and freshness, all are important to consumers.
- Discussion at presentation of results uncovered opportunity for institutional purchasing of single-serve milk products (UMass Dartmouth, other State institutions) and marketing of single serve milk products through vending machines.

II. <u>LIKELIHOOD OF IMPLEMENTATION OF PROJECT RESULTS IN MASSACHUSETTS AGRICULTURAL INDUSTRY FOLLOW-UP ACTIVITIES AS A RESULT OF RESEARCH</u>

As a direct result of this research local producers have become very interested in uniting to form a business venture to produce, package and market local milk and milk products. Due to the evidence that consumers are interested in purchasing from local farmers and are willing to pay more, two meetings with milk producers were conducted between Rhode Island and southeastern Massachusetts producers. Two additional meetings of producers have been conducted in southeastern Massachusetts. Presently, 12 to 15 southeastern Massachusetts dairy producers are interested in pursuing processing, packaging and marketing of locally branded milk and milk products. Several meetings have been conducted to assess the business direction that southeastern Massachusetts's producers should take. Meetings have been conducted with Rhode Island producers who are pursuing processing, packaging and marketing their own locally branded products to determine if opportunity exists for uniting efforts. Rhode Island producers decided not to unite efforts, however, they are open to southeastern Massachusetts producers co-packing at Windsor of Providence RI.

Uniting with “Our Family Farms” producers from western Massachusetts and central Massachusetts' producers in a state-wide effort to process and co-pack local products is presently under serious consideration. Investigations of using existing processing facilities like Windsor, in Providence, RI, or building one processing facility to serve the state-wide initiative are underway. It has been announced at meetings that there are financial investors interested in investing in a new local dairy products business venture and are willing to invest in a processing plant, if that is found to be necessary.

Due to the evidence that environmentally-sound packaging is important to more than half of consumers surveyed, further research by volunteers into plastic pouch-packaging has revealed that pouch packages are used in the Azores and is familiar to the Portuguese population of southeastern Massachusetts. Many of the local dairy farmers are Portuguese-Americans and find the pouch packaging an appealing marketing opportunity. Contacts have been made with Dupont, manufacturers of pouch plastic film and packaging equipment. Dupont is very interested in introducing pouch packaging in the northeast and will provide support and marketing assistance.

Research determined that consumers were likely to purchase milk from a local farmer if it were readily available and at a reasonable price, and the majority state that they were willing to pay more for products that came from a local farmer. This research though did not reveal how much more consumers willing to pay. Our Family Farms, personnel at MA Department of Food and Agriculture, and review of “The Milk Project” report prepared for Seamonds & Co. (February 1996), showed that consumers were willing to pay \$.30 - \$.60 more for local premium products. This has proven true as Our Family Farms half-gallon and gallon milk prices are \$.20 and \$.40 more per unit, respectively. Further research on pricing will be conducted when producers pursue development of business plan. Producers, dairy specialists and USDA personnel are presently researching the percentage of volume producers need to commit to this venture to benefit economically.

Sponsored by the Westport Agricultural Commission, a critical meeting of producers will be conducted on February 27, 2002. The meeting will:

- Assess commitment of producers to participate (contribute % of supply) to local venture,
- Review options for processing and packaging i.e., use of existing processing facility in Providence, RI for processing and co-packing or construction of new processing facility, perhaps as part of a statewide initiative.
- Present Dupont's interest in plastic pouch packaging and marketing.
- Present information about potential investors in business venture.
- Business plan development, funding needed, options for funding, securing best professionals for plan development. Business plan will address processing, volume, pricing, markets and marketing (using results of project research and literature search), packaging, expected gross and net income returned to producer based on processing scenarios, and business structuring in detail.

Partners in southeastern Massachusetts' local, value-added dairy processing, packaging and marketing initiatives include:

Westport, Dartmouth, Fairhaven, Foxboro and Middleborough milk producers
UMass Dartmouth Continuing Education
West Branch Association
Westport and Dartmouth Agricultural Commissions
Slades Ferry Center for Business Research
Our Family Farms
MA Department of Food and Agriculture

SEMAP
SBDC
Dupont
Agri-mark
Garelick
Pilgrim RC&D Area Council, Inc.
USDA-Farm Service Agency

III. PROJECT GOAL ATTAINMENT

From research conducted, literature research and follow-up networking we know that:

- Consumers are interested in purchasing milk and milk products from local farmers and are willing to pay more. Majority of consumers purchase unflavored, 1% milk in gallon size. Although this research did not reveal how much consumers were willing to pay, professional staff from University of Massachusetts Dartmouth, Corporate Programs and Partnership reviewed " The Milk Project" survey results and found that research was conudcted in southeastern Massahcusetts and results applied to our efforts. Using this data it was determined that consumers were willing to pay $.30 - $.60 more for local premium products. This has proven true as Our Family Farms half-gallon and gallon milk prices are $.20 and $.40 more per unit, respectively.
- Environmentally-sound packaging is important to more than half of consumers surveyed.
- It will be critical to market and gain prime shelf position at supermarkets (Stop and Shop, Shaws, IGA, Trucci's, Lees).
- Effective and aggressive marketing is critical to the success of new locally branded product business. New markets need to be explored, particularly Generation X.
- Health benefits of milk products need to be marketed aggressively and creatively.
- Agri-mark and Garelick are open to members developing new local milk business venture.
- Agri-mark is open to changes in hauling scheduling and routes .
- Opportunities exist for processing and co-packing at an existing processing facility. Additionally, western Massachusetts producers are interested in investigating opportunities in uniting efforts with southeastern Massachusetts to construct a processing and packaging plant.
- Dupont is very interested in introducing their plastic pouch packaging(environmentally-sound) in the northeast, has agreed to a meeting in southeastern Massachusetts to discuss equipment, marketing and other issues.
- A group of financial investors exists that support this new venture.
- Project coordination is critical to the future of this business venture.
- A detailed Business Plan is the next necessary step.

Research did not include volume demand by market segment, business operations or organizational structuring. These components were part of the original proposal, however, researchers originally contacted to complete work would not consider this project upon the funding reduction from $15,000 to $10,000. Focus was maintained on consumer buying behavior, product preferences, market trends and volunteer research into pricing, processing, packaging, business partnering opportunities, organizing and informing local producers of emerging information and opportunities.

Producers in southeastern Massachusetts are uniting in this effort, leaders are beginning to emerge, as are investors, potential business partners and advisors. In this light, the goal of the project have been attained.

III. PROBLEMS ENCOUNTERED AND OVERCOMING THEM

The most significant problem encountered in this project was the not having a clearly identified leader among the milk producers. Most producers have little or no time outside of their businesses for short or extensive meetings. Few have the time to provide the organization and networking required to keep producers informed. During the project these roles were taken on by the Dartmouth and Westport Agricultural Commissions, UMass Dartmouth personnel, as well as the Westport Branch Association and USDA Farm Service Agency.

It takes time for a leader to emerge that will advocate advancement of a new business venture within the dairy producer community. After over three years of discussing the idea of local milk marketing, given the results of this research and The Milk Project, networking and information provided at meetings, (from investors, dairy cooperatives, processors and packaging companies) leaders and advocates of advancing this new business venture have emerged.

Throughout this process their have been those with the new business and packaging ideas, those who are trusted by the producers and can communicate the new business ideas, those who have supported funding of necessary research to advance the idea, those who complete the research. There are those who follow-through and are persistent in organizing the producers to take the next steps needed in this local milk business venture. Based on the results of the efforts of many and the information produced, the milk producers themselves will now decide whether to pursue local milk product marketing and how they will do it.

V. BUDGET

MDFA AgroEnvironmental Technology Grant

ITEM	AMOUNT	FUNDER	CASH
Project Director	$ 1,500.00	MDFA/AETG	Cash-grant
Data Processor	$ 500.00	MDFA/AETG	Cash-grant
Interviewers	$ 4,800.00	MDFA/AETG	Cash-grant
Telephone Calls	$ 80.00	MDFA/AETG	Cash-grant
Printing	$ 90.00	MDFA/AETG	Cash-grant
Supplies	$ 30.00	MDFA/AETG	Cash-grant
Grant Subtotal	**$ 7,000.00**		

Matches

Center for Business Research Overhead	$ 3,000.00	Westport Branch Assoc.	Cash
Final Presentation (catered dinner)	$ 400.00	Center for Bus. Research	In-kind
UMD Continuing Ed. Corp. Programs and Partnerships (contacts OFF, meetings, networking, and coordination)	$ 2,400.00 (40hrs@$60/hr)	UMD Cont. Ed. Corp Programs and Partnerships	In-kind
Pilgrim RC&D Council, Inc. (Reporting, printing supplies, grant management)	$ 1,000.00	Pilgrim RC&D Area Council, Inc.	In-kind
Match Subtotal	**$ 6,800.00**		
TOTAL	**$13,800.00**		

SURVEY RESULTS

Milk Consumption and Purchasing Behavior

- **Dairy product consumption:**
  98% of consumers surveyed stated that they or their families consume dairy products. Nearly half consume dairy products more than once a day.

- **Dairy products purchased on a regular basis:**
  97% purchase milk
  86% purchase cheese
  73% purchase butter
  65% purchase ice cream
  34% yogurt
  25% purchase cream

- **Where consumers purchase dairy products:** (Where consumers surveyed said they purchase dairy products)

  95% at a supermarket
  23% at a convenience store
  1% directly from farm/farm store
  1% local ice cream stores and home delivery
  0% vending machines
  0% cafeteria

- **What type of milk are consumers interested in purchasing?**

  54% stated very interested or interested in purchasing 1% milk (22% uninterested/22% very uninterested)
  51% stated very interested or interested in purchasing 2% milk (20% uninterested/32% very uninterested)
  40% stated very interested or interested in purchasing skim milk (25% uninterested/36% very uninterested)
  22% state very interested or interested in purchasing whole milk (26% uninterested/52% veryuninterested)

- **Consumers interest in purchasing flavored milk:**

  97% stated very interested and interested in unflavored milk.
  62% stated very interested and interested in chocolate flavored milk
  53% stated very interested or interested in coffee flavored milk
  35% stated very interested or interested in strawberry flavored milk

- **Consumer preferences in milk package size:**

  72% stated normally purchase by the gallon
  24% stated normally purchase by half-gallon
  8% stated normally purchase by the quart
  1% stated normally purchase in single serve size

- **Single-size appeal:**

  55% stated that a single-size dairy product is very appealing or appealing to them.

- **How important is environmentally-sound packaging to consumers?**

  52% state very or somewhat important
  31% stated somewhat unimportant
  17% stated very unimportant

- **Are consumers willing to pay more for environmentally-sound packaging?**

  29% stated they would definitely be willing or probably willing to pay more
  18% state possibly
  54% stated definitely not

- **Vitamin and Mineral Additives-Are they important to the consumer?**

  76% stated very important or somewhat important to have vitamins, minerals, and calcium added to dairy products.

- **Likelihood of consumers purchasing milk from a local farmer:**

  69% stated that it was very likely or somewhat likely if it was readily available at a reasonable price

- **Are consumers willing to pay more for dairy products that come from a local farmer?**

  54% stated that said that they were willing to pay more or probably willing to pay more
  29% stated probably not
  17% stated definitely not

Value-added Dairy Products, Consumption and Purchasing Behavior

Cheeses

- **Consumer Interest in purchasing different forms of cheese:**

  72% stated very interested or interested in purchasing refrigerated shredded cheese.
  60% stated very interested or interested in purchasing packaged cheese cuts for use on salads…
  32% stated very interested or interested in purchasing cheesecake bars

27% stated very interested or interested in purchasing ethnic cheeses
16% stated very interested or interested in purchasing cream cheese with fruits, berries or herbs
13% stated very interested or interested in purchasing smoked cheese
11% stated very interested or interested in purchasing organic cheese

- **Likelihood of consumers purchasing cheese from a local farmer:**
  49% stated very interested or interested in purchasing cheese from a local farmer if readily available at a reasonable price.

Yogurt/yogurt products

- **Consumer Interest in purchasing yogurt and different forms of yogurt:**
  45% stated very interested or interested in purchasing a yogurt drink with added fruit, wheat flakes and rolled oats.
  24% stated very interested or interested in purchasing a smoothie with digestive process benefits
  23% state very interested or interested in purchasing cranberry yogurt
  15% stated very interested or interested in purchasing organic yogurt

- **Likelihood of consumers purchasing yogurt from a local farmer:**
  33% stated very interested or interested in purchasing yogurt from a local farmer if readily available at a reasonable price.

Butter

- **Consumer interest in purchasing flavored butter:**
  12% stated very interested or interested in flavored butter

- **Consumer interest in event-theme-shaped butter**
  37% stated very interested or interested.

- **Likelihood of consumers purchasing butter from a local farmer:**
  44% stated very interested or interested in purchasing butter from a local farmer if readily available at a reasonable price.

Ice Cream

- **Likelihood of consumers purchasing ice cream from a local farmer:**
  50% stated very interested or interested in purchasing butter from a local farmer if readily available at a reasonable price.

Dairy Product Delivery
- 42% state very appealing or appealing to have fresh dairy products delivered to their home.